

CURRICULUM VITAE FOR IVAN B. DJORDJEVIC

CHRONOLOGY OF EDUCATION

Postdoctoral Institutions:

- University of Arizona, Tucson, USA, 12/2001-9/2002
- National Technical University of Athens, Athens, Greece, 4/2000-5/2001

8/1999	Ph.D.	Electrical Engineering University of Nis, Nis, Yugoslavia
2/1997	M.S.	Electrical Engineering University of Nis, Nis, Yugoslavia GPA: 10/10
11/1994	B.S.	Electrical Engineering University of Nis, Nis, Yugoslavia Graduated with highest distinction (the Best Student of the University Award) GPA: 9.65/10 Majored in Electronics and Telecommunications

CHRONOLOGY OF EMPLOYMENT

8/17 –Present	Professor (Tenured) Department of Electrical and Computer Engineering University of Arizona, Tucson, AZ Joint Appointment with College of Optical Sciences University of Arizona, Tucson, AZ
8/12 –8/17	Associate Professor (Tenured) Department of Electrical and Computer Engineering University of Arizona, Tucson, AZ Joint Appointment with College of Optical Sciences University of Arizona, Tucson, AZ
1/13-12/16	Guest/Visiting Professor & TU Fellow Technische Universität Darmstadt, Darmstadt, Germany
7/06 – 7/12	Assistant Professor Department of Electrical and Computer Engineering, College of Engineering Joint Appointment with College of Optical Sciences University of Arizona, Tucson, AZ
1/04 – 7/06	Research Assistant Professor Department of Electrical and Computer Engineering University of Arizona, Tucson, AZ
9/03 – 12/05	Senior Lecturer in Telecommunications Faculty of Computing, Engineering and Mathematical Sciences (now Bristol Institute of Technology) University of the West of England, Bristol, UK
9/02 – 9/03	Research Scientist Department of Electrical and Electronic Engineering University of Bristol Bristol, UK

12/01 – 9/02	Research Scientist Department of Electrical and Computer Engineering University of Arizona, Tucson, AZ
6/01 – 12/01	Senior Member of Technical Staff Tyco Telecommunications Eatontown, NJ, USA
4/00 – 5/01	Postdoctoral Fellow School of Electrical and Computer Engineering National Technical University of Athens, Athens, Greece
1/96 – 9/00	Telecommunication Equipment Specialist National Telecommunications Company Nis, Yugoslavia
11/94 – 1/96	Research/Teaching Assistant Faculty of Electronic Engineering University of Nis Nis, Yugoslavia

HONORS AND AWARDS

- OSA Fellow, Oct. 2016
- 1885 Society Distinguished Scholar Award, 2014
- NSF CAREER Award, NSF CCF, 2010
- Elected to Senior Member Grade, Institute of Electrical and Electronics Engineers (IEEE), January 2011
- The Best Paper in the field of Telecommunications Award and Telenor Award, ETRAN 2007
- The Best Student of the University Award, University of Nis, Nis, Yugoslavia, 1995
- The Highest GPA Student Award, University of Nis, Nis, Yugoslavia, 1995
- Serbian Ministry of Science and Technology, 1995
 - M.Sc. Scholarship
- Serbian Ministry of Education, 1991-1994
 - B.Sc. Scholarship

SERVICE/OUTREACH

National/International Outreach

- OSA Fellow, Oct. 2016-present
- Lead Guest Editor, IEEE Signal Processing Magazine, special issue on Advanced DSP and Coding for Multi-Tb/s-per-Channel Optical Transport (publication date: March 2014)
- Member of Editorial Board, IOP Journal of Optics
- Editor, IEEE Communications Letters
- Member of Editorial Board, Elsevier Physical Communication (PHYCOM) Journal
- Member of Editorial Board, Frequenz
- Member of Editorial Board, International Journal of Optics, Aug. 2008-Aug. 2017
- 2017 IWCMC Wireless Optical Networks Symposium (IWCMC 2017 WON Symposium), TPC Member
- CLEO 2012-2014 TPC Member
- IEEE Photonics Conference (previously known as the IEEE LEOS Annual Meeting) 2009- 2012
 - Optical Communications Committee Member
- ACP 2010, 2014, 2016 TPC Member
- OFC 2011-2013, Digital Transmission Systems Committee Member
- SPIE PhotonicsWest 2014-2016 TPC Member
- IEEE TELSIS 2013, 2015, 2017 TPC Member
- IEEE GLOBECOM 2013-2015 Workshop OWC TPC Member
- IEEE Senior Member, Jan. 2011-present
- IEEE Member, 2002-2010

- IEEE Photonics Society Senior Member
- IEEE ComSoc Senior Member
- IEEE Communications Society Technical Committee on Transmission, Access and Optical Systems (TAOS) (Member)
- IEEE ComSoc Signal Processing and Communications Electronics Technical Committee (Member)
- Journals and Conferences Reviewer:
 - IEEE Photonics Technology Letters
 - IEEE Communications Letters
 - IEEE Transactions on Communications
 - IEEE/OSA Journal of Lightwave Technology
 - IEEE Transactions on Information Theory
 - IEEE Transactions on Wireless Communications
 - IEEE/OSA Journal on Selected Topics in Quantum Electronics
 - IEEE Journal of Selected Areas in Communications
 - IEEE Transactions on Signal Processing
 - Quantum Information Processing
 - IET Optoelectronics
 - OSA Optics Letters
 - OSA Optics Express
 - IEEE Communications Magazine
 - IEEE Photonics Journal
 - IEEE Transactions on Aerospace and Electronic Systems
 - Opto-Electronics Review
 - Frontiers of Optoelectronics
 - Journal of Parallel and Distributed Computing
 - AEUE International Journal of Electronics and Communications
 - Applied Physics B - Lasers and Optics
 - Wireless Personal Communications
 - Optical Engineering
 - Journal of Zhejiang University Science C (Computers & Electronics)
 - FREQUENZ
 - China Communications
 - IEEE International Conference on Communications (ICC)
 - IEEE International Symposium on Information Theory (ISIT)
 - IEEE Global Communications Conference (Globecom)
 - Wireless and Optical Communications Conference (WOCC)
- External Examiner/Project Proposal Evaluator for:
 - Israel Science Foundation
 - European Research Council (ERC)
 - Serbian Ministry of Education, Science, and Technological Development
 - McMaster University, Canada
 - University of Melbourne, Australia
 - Gwangju Institute of Science and Technology, Gwangju, Korea

Courses Developed/Modernized

- Digital Communications Systems (ECE 435A/535A) (Course developed)
- Quantum information processing and quantum error correction (ECE 633) (Course developed)
- Advanced optical communication systems (ECE/OPTI632) (Course developed)
- Wireless communications (ECE638) (Course developed)
- Introduction to digital communications (ECE435) (Course modernized)
- Optical communication systems ECE/OPTI 430/530 (Course modernized)

New Academic Degree Program Development

- A member of the team that developed a new joint MS degree program of two Colleges (College of Optical Sciences and College of Engineering) entitled MS in Photonic Communications Engineering, which started in Spring 2011. The ECE/OPTI 430/530 (Optical Communications Systems), thought by Dr. Djordjevic at the time, is a core course for this program. The ECE/OPTI 632 (Advanced Optical Communications) and ECE 638 (Wireless Communications), two courses developed and thought by Dr. Djordjevic, are elective courses for this program.

Courses Taught

- ECE 638: Wireless Communications (Fall 2017, Fall 2015, Fall 2012, Fall 2010, Spring 2009)
- ECE 435A/535A Digital Communications Systems (Spring 2015, Spring 2014)
- ECE 633: Quantum Information Processing and Quantum Error Correction (Fall 2014, Fall 2011, Fall 2009)
- ECE 435: Introduction to Digital Communications (Fall 2011, Fall 2010, Fall 2009, Fall 2008, Fall 2004)
- ECE/OPTI 632: Advanced Optical Communication Systems (Spring 2012, Fall 2010, Fall 2007)
- ECE/OPTI 430/530: Optical Communication Systems (Spring 2010, Spring 2007, Fall 2006)
- ECE 429/529: Digital Signal Processing (Spring 2008)
- ECE 340: Engineering Systems Analysis (Spring 2012, Spring 2008)
- ECE 537: Digital Communications Systems II (2005, co-taught with Prof. Vasic)
- ECE 535: Digital Communications Systems I (2005, co-taught with Prof. Vasic)
- University of the West of England UFE004C2: Introduction to Communication Systems and Signals (two semesters' course: one semester on Signals & Systems, one semester on Communication Systems)
- University of the West of England UFE084H1: Electrical Interface (equivalent to Introduction to Electrical Engineering)

Current PhD Students

- Zhen Qu
- Xiaole Sun
- John Gariano
- Mingwei Yang
- Xiao Han
- Ziwen Pan

Minor advisor:

- Rahul Kumar Bhadani (OPTI minor advisor)
- Berk Akgun (ECE minor advisor)

Former PhD Students

- Ding Zou (Pure Storage)
- Changyu Lin (Infinera)
- Tao Liu (Infinera)
- Yequn Zhang (ClariPhy)
- Murat Arabaci (ViaSat, Juniper Networks)
- Hussam G. Batshon (Subcom Tyco)
- Lyubomir L. Minkov
- Milos Ivkovic (Cornell University, co-supervised with Professors Vasic and Gabitov)
- Jose Castro (Panduit, co-advise with Dr. David Geraghty)

Current MS Students:

- Sai Rakesh Mohan Krishna Vangapandu (OPTI student)
- Tyan-Lin Wang (OPTI student)

Former MS Students

- Mickey Rhoades (US Navy, USS FORD)
- Xiao Han (University of Arizona, Tucson, AZ)
- Di Xiao (Evus Technologies, Tucson, AZ)
- Aotuo Dong (University of New Mexico)
- Paul Genz (University of Arizona)
- Hatice Irem Demir (TU Darmstadt, Germany) (MS thesis completed during student's visit to Dr. Djordjevic's Lab in 2014)
- Alaa Saleh (TU Darmstadt, Germany) (MS thesis completed during Dr. Djordjevic's sabbatical in 2013)
- Ding Zou (University of Arizona)
- Tao Liu (University of Arizona)
- Mahesh Sharma (Qualcomm)

- Hussam G. Batshon (Subcom Tyco)
- Samita R. Pokhrel
- Anita Patil (co-advise with Dr. David Geraghty)
- Varsha S. Rao (Qualcomm, co-advise with Prof. Bane Vasic)

PUBLICATIONS

Books

- [B-1] I. B. Djordjevic, *Advanced Optical and Wireless Communications Systems*. Springer International Publishing, Switzerland, Dec. 2017.
- [B-2] I. B. Djordjevic, *Quantum Biological Information Theory*. Springer, Nov. 2015.
- [B-3] M. Cvijetic, I. B. Djordjevic, *Advanced Optical Communications and Networks*. Artech House, 2013.
- [B-4] I. B. Djordjevic, *Quantum Information Processing and Quantum Error Correction: An Engineering Approach*. Elsevier/Academic Press, 2012.
- [B-5] I. Djordjevic, W. Ryan, and B. Vasic, *Coding for Optical Channels*. Springer, 2010.
- [B-6] W. Shieh and I. Djordjevic, *OFDM for Optical Communications*. Elsevier, Oct. 2009.

Book Chapters

- [B-7] I. B. Djordjevic, "Advanced coding for fiber-optics communications systems," in *The Potential for Networks with Capacities Exceeding the Nonlinear Threshold*, (A. Ellis, Editor), Pan Stanford Publishing Pte. Ltd, UK, to appear in 2018.
- [B-8] I. B. Djordjevic, Z. Qu, "Coded Orbital Angular Momentum Modulation and Multiplexing Enabling Ultra-High-Speed Free-Space Optical Transmission," in *Optical Wireless Communications - An Emerging Technology*, (M. Uysal, C. Capsoni, Z. Ghassemlooy, A. Boucouvalas, E. G. Udvary, Editors), pp. 363-385, Springer, 2016.
- [B-9] I. B. Djordjevic, Z. Qu, "Coded Orbital-Angular-Momentum-Based Free-Space Optical Transmission," in *Wiley Encyclopedia of Electrical and Electronics Engineering*, Feb. 2016. (12 pages)
Available at: <http://onlinelibrary.wiley.com/doi/10.1002/047134608X.W8291/abstract>
- [B-10] I. B. Djordjevic, "Advanced coding for optical communication systems," in *Optical Fiber Telecommunications VI*, (I. Kaminow, T. Li and A. Willner, Editors), pp. 221-296, Elsevier/Academic Press, May 2013.
- [B-11] I. B. Djordjevic, "Coding and modulation techniques for optical wireless channels," in *Advanced Optical Wireless Communication Systems*, (S. Arnon, J. Barry, G. Karagiannidis, R. Schober and M. Uysal Eds.), Cambridge University Press, pages 11-53, May 2012.
- [B-12] I. B. Djordjevic, "Codes on graphs, coded modulation and compensation of nonlinear impairments by turbo equalization," in *Impact of Nonlinearities on Fiber Optic Communication*, (S. Kumar Ed.), Springer, pages 451-505, Mar. 2011.
- [B-13] I. B. Djordjevic, "Suppression of intrachannel nonlinearities in high-speed WDM systems," in *Advanced Technologies for High-Speed Optical Communications*, (L. Xu Ed.), pp. 247-277, Research Signpost, 2007.

Refereed Journal Papers

- [J-1] Z. Qu, I. B. Djordjevic, "Four-dimensionally multiplexed eight-state continuous-variable quantum key distribution over turbulent channels," *IEEE Photonics Journal*, vol. 9, no. 6, pp. 7600408-1–7600408-8, Dec. 2017.
[Available at: <http://ieeexplore.ieee.org/document/8119485/>]
- [J-2] Z. Qu, Y. Li, W. Mo, M. Yang, S. Zhu, D. Kilper, I. B. Djordjevic, "Performance optimization of PM-16QAM transmission system enabled by real-time self-adaptive coding," *Optics Letters*, vol. 42, no. 20, pp. 4211-4214, 2017.
[Available at: <https://www.osapublishing.org/ol/abstract.cfm?uri=ol-42-20-4211>]
- [J-3] I. B. Djordjevic, "Multidimensional OAM-based Secure High-Speed Wireless Communications," *IEEE Access*, vol. 5, pp. 16416-16428, September 6, 2017.
[Available at: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=8002571&isnumber=6514899>]
- [J-4] Z. Qu and I. B. Djordjevic, "Two-stage Crosstalk Mitigation in an Orbital Angular Momentum-based Free-space Optical Communication System," *Optics Letters*, vo. 42, no. 16, pp. 3125-3128, 2017.
[Available at: <https://www.osapublishing.org/ol/abstract.cfm?uri=ol-42-16-3125>]
- [J-5] I. B. Djordjevic, "OAM-based Hybrid Free-Space Optical-Terahertz Multidimensional Coded Modulation and Physical-Layer Security," *IEEE Photonics Journal*, vol. 9, no. 4, pp. 7905712-1–7905712-12, Aug. 2017.
[Available at: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7972942&isnumber=7953746>]
- [J-6] Z. Qu and I. B. Djordjevic, "High-speed free-space optical continuous-variable quantum key distribution enabled by three-dimensional multiplexing," *Opt. Express*, vol. 25, no. 7, pp. 7919-7928, 2017.
[Available at: <https://www.osapublishing.org/oe/abstract.cfm?uri=oe-25-7-7919>]
- [J-7] D. Zou, C. Lin, I. B. Djordjevic, "FPGA-based LDPC-coded APSK for optical communication systems," *Optics Express*, vol. 25, no. 4, pp. 3133- 3142, 20 Feb 2017.

- [Available at: <https://www.osapublishing.org/oe/fulltext.cfm?uri=oe-25-4-3133>]
- [J-8] J. Gariano, M. Neifeld, I. Djordjevic, "Engineering Trade Studies for a Quantum Key Distribution System over a 30 km Free-Space Maritime Channel," *Applied Optics*, vol. 56, no. 3, pp. 543-556, Jan. 20, 2017.
[Available at: <https://www.osapublishing.org/ao/abstract.cfm?uri=ao-56-3-543>]
- [J-9] S. Zhang, F. Yaman, Y.-K. Huang, J. D. Downie, D. Zou, W. A. Wood, A. Zakharian, R. Khrapko, S. Mishra, V. Nazarov, J. Hurley, I. B. Djordjevic, "Capacity-Approaching Transmission over 6375 km using Hybrid Quasi-Single-Mode Fiber Spans," *IEEE/OSA J. Lightw. Technol.*, vol. 35, no. 3, pp. 481-487, Feb. 1, 2017, doi: 10.1109/JLT.2016.2631151.
[Available at: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7750572&isnumber=4357488>]
- [J-10] Z. Qu, I. B. Djordjevic, M. A. Neifeld, "RF-subcarrier-assisted Four-state Continuous-variable QKD Based on Coherent Detection," *Optics Letters*, vol. 41, no. 23, pp. 5507-5510, Dec. 1, 2016.
[Available at: <https://www.osapublishing.org/ol/abstract.cfm?uri=ol-41-23-5507>]
- [J-11] X. Sun, I. B. Djordjevic, M. A. Neifeld, "Multiple spatial modes based QKD over marine free-space optical channels in the presence of atmospheric turbulence," *Optics Express*, vol. 24, no. 24, pp. 27663-27673, 28 Nov 2016.
[Available at: <https://www.osapublishing.org/oe/abstract.cfm?uri=oe-24-24-27663>]
- [J-12] D. Zou, I. B. Djordjevic, "FPGA-based rate-adaptive LDPC-coded modulation for the next generation of optical communication systems," *Optics Express*, vol. 24, no. 18, pp. 21159-21166, 2016.
[Available at: <https://www.osapublishing.org/oe/abstract.cfm?uri=oe-24-18-21159>]
- [J-13] D. Zou, I. B. Djordjevic, "FPGA-based rate-compatible LDPC codes for the next generation of optical transmission systems," *IEEE Photonics Journal*, vol. 8, no. 5, pp. 7906008-1–7906008-8, Oct. 2016, DOI: [10.1109/JPHOT.2016.2602063](https://doi.org/10.1109/JPHOT.2016.2602063).
- [J-14] C. Lin, D. Zou, T. Liu, I. B. Djordjevic, "Capacity Achieving Nonbinary LDPC Coded Non-Uniform Shaping Modulation for Adaptive Optical Communications," *Optics Express*, vol. 24, no. 16, pp. 18095-18104, 2016.
[Available at: <https://www.osapublishing.org/oe/abstract.cfm?uri=oe-24-16-18095>]
- [J-15] Z. Qu, I. B. Djordjevic, "500Gb/s Free-Space Optical Transmission over Strong Atmospheric Turbulence Channels," *Optics Letters*, vol. 41, no. 14, pp. 3285-3288, July 15 2016.
[Available at: <https://www.osapublishing.org/ol/abstract.cfm?uri=ol-41-14-3285>]
- [J-16] T. Liu, C. Lin, I. B. Djordjevic, "Advanced GF(3²) nonbinary LDPC coded modulation with non-uniform 9-QAM outperforming star 8-QAM," *Optics Express*, vol. 24, no. 13, pp. 13866-13874, 2016.
[Available at: <https://www.osapublishing.org/oe/abstract.cfm?uri=oe-24-13-13866>]
- [J-17] X. Sun, I. B. Djordjevic, M. A. Neifeld, "Secret key rates and optimization of BB84 and decoy state protocols over time-varying free-space optical channels," *IEEE Photonics J.*, vol. 8, no. 3, pp. 7904713-1–7904713-13, June 2016, DOI: [10.1109/JPHOT.2016.2570000](https://doi.org/10.1109/JPHOT.2016.2570000).
- [J-18] T. Liu, I. B. Djordjevic, Z. Song, Y. Chen, R. Zhang, K. Zhang, W. Zhao, B. Li, "Broadband wavelength converters with flat-top responses based on cascaded second-harmonic generation and difference frequency generation in Bessel-chirped gratings," *Optics Express*, vol. 24, no. 10, pp. 10946-10955, 16 May 2016.
[Available at: <https://www.osapublishing.org/oe/abstract.cfm?uri=oe-24-10-10946>]
- [J-19] I. B. Djordjevic, "On Advanced FEC and Coded Modulation for Ultra-High-Speed Optical Transmission," *IEEE Communications Surveys and Tutorials*, vol. 18, no. 3, pp. 1920-1951, third quarter 2016, August 19, 2016, DOI: [10.1109/COMST.2016.2536726](https://doi.org/10.1109/COMST.2016.2536726).
- [J-20] I. B. Djordjevic, "Integrated optics modules based proposal for quantum information processing, teleportation, QKD, and quantum error correction employing photon angular momentum," *IEEE Photonics Journal*, vol. 8, no. 1, pp. 6600212-1–6600212-12, Feb. 2016, DOI: [10.1109/JPHOT.2016.2522097](https://doi.org/10.1109/JPHOT.2016.2522097).
- [J-21] X. Sun, I. B. Djordjevic, "Physical-layer security in orbital angular momentum multiplexing free-space optical communications," *IEEE Photonics Journal*, vol. 8, no. 1, pp. 01110-1–01110-10, Feb. 2016, DOI: [10.1109/JPHOT.2016.2519279](https://doi.org/10.1109/JPHOT.2016.2519279)].
- [J-22] Y. Ren, Z. Wang, P. Liao, L. Li, G. Xie, H. Huang, Z. Zhao, Y. Yan, N. Ahmed, A. Willner, M. P. J. Lavery, N. Ashrafi, S. Ashrafi, R. Bock, M. Tur, I. B. Djordjevic, M. A. Neifeld, and A. E. Willner, "Experimental characterization of a 400 Gbit/s orbital angular momentum multiplexed free-space optical link over 120 meters," *Optics Letters*, vol. 41, no. 3, pp. 622-625, February 1 2016.
[Available at: <https://www.osapublishing.org/ol/abstract.cfm?URI=ol-41-3-622>]
- [J-23] G. Tzimpragos, C. Kachris, I. B. Djordjevic, M. Cvijetic, D. Soudris, and I. Tomkos, "A Survey on FEC Codes for 100G and Beyond Optical Networks," *IEEE Communications Surveys and Tutorials*, vol. 18, no. 1, pp. 209-221, first quarter 2016. [DOI: [10.1109/COMST.2014.2361754](https://doi.org/10.1109/COMST.2014.2361754)]
- [J-24] I. B. Djordjevic, "Markov Chain-Like Quantum Biological Modeling of Mutations, Aging, and Evolution," *Life*, vol. 5, no. 3, pp. 1518-1538, 2015; doi:10.3390/life5031518.
[Available at: <http://www.mdpi.com/2075-1729/5/3/1518>]
- [J-25] Y. Zhang, I. B. Djordjevic, M. Neifeld, "Weak-Coherent-State-Based Time-Frequency Quantum Key Distribution," *Journal of Modern Optics*, DOI: 10.1080/09500340.2015.1075616, 18 Aug 2015. (9 pages)
[Available at: <http://dx.doi.org/10.1080/09500340.2015.1075616>]
- [J-26] T. Liu, I. B. Djordjevic, "Signal Constellation Design for Cross-Phase Modulation Dominated Channels," *IEEE Photonics Journal*, vol. 7, no. 4, Paper 0800108, Aug. 2015. (8 pages)

- [J-27] C. Lin, I. B. Djordjevic, D. Zou, "Achievable information rates calculation for optical OFDM transmission over few-mode fiber long-haul transmission systems," *Optics Express*, vol. 23, no. 13, pp. 16846-16856, 2015.
- [J-28] D. Zou, I. B. Djordjevic, "FPGA implementation of concatenated non-binary QC-LDPC codes for high-speed optical transport," *Optics Express*, vol. 23, no. 10, pp. 14501-14509, 18 May 2015.
- [J-29] I. B. Djordjevic, "Energy-efficient multinary signaling for ultra-high-speed optical transport," *SPIE Newsroom, Optoelectronics & Communications*, Paper 10.1117/2.1201502.005810, pp. 1-3, March 2015. [Available at: <http://spie.org/x112662.xml>]
- [J-30] I. B. Djordjevic, T. Liu, T. Wang, "Multinary Signaling based Coded Modulation for Ultra-High-Speed Optical Transport," *IEEE Photonics Journal*, vol. 7, no. 1, pp. 7900909-1 - 7900909-9, Feb. 2015.
- [J-31] T. Liu, I. B. Djordjevic, "Optimal Signal Constellation Design for Ultra-High-Speed Optical Transport in the Presence of Nonlinear Phase Noise," *Optics Express*, vol. 22, no. 26, pp. 32188-32198, 29 Dec 2014.
- [J-32] I. B. Djordjevic, A. Jovanovic, Z. H. Peric, T. Wang, "Multidimensional Optical Transport Based on Optimized Vector-Quantization-Inspired Signal Constellation Design," *IEEE Transactions on Communications*, vol. 62, no. 9, pp. 3262-3273, Sept. 2014.
- [J-33] I. B. Djordjevic, T. Wang, "Multiple component codes based generalized LDPC codes for high-speed optical transport," *Optics Express*, vol. 22, no. 14, pp. 16694-16705, 2014.
- [J-34] T. Liu, I. B. Djordjevic, "Multi-dimensional Optimal Signal Constellation Sets and Symbol Mappings for Block-Interleaved Coded-Modulation Enabling Ultra-High-Speed Optical Transport," *IEEE Photonics Journal*, vol. 6, no. 4, Paper 5500714, Aug. 2014. (14 pages)
- [J-35] C. Lin, I. B. Djordjevic, M. Cvijetic, and D. Zou, "Mode-Multiplexed Multi-Tb/s Superchannel Transmission with Advanced Multidimensional Signaling in the Presence of Fiber Nonlinearities," *IEEE Transactions on Communications*, vol. 62, no. 7, pp. 2507-2514, July 2014.
- [J-36] J. Zhang, I. B. Djordjevic, "Mapping Design of a Four-Dimensional 32-ary Signal Constellation over an AWGN Channel," *China Communications*, pp. 64-73, vol. 11, no. 7, July 2014.
- [J-37] I. B. Djordjevic, A. H. Saleh, F. Küppers, "Design of DPSS based fiber Bragg gratings and their application in all-optical encryption, OCDMA, optical steganography, and orthogonal-division multiplexing," *Optics Express*, vol. 22, no. 9, pp. 10882-10897, 5 May 2014.
- [J-38] A. Emsia, Q. T. Le, M. Malekizandi, D. Briggmann, I. B. Djordjevic, F. Kueppers, "WDM-TDM NG-PON Power Budget Extension by Utilizing SOA in the Remote Node," *IEEE Photonics Journal*, vol. 6, no. 2, Paper 7901310, Apr. 2014. (10 pages)
- [J-39] J. A. Anguita, J. Herreros, I. B. Djordjevic, "Coherent multi-mode OAM superpositions for multi-dimensional modulation," *IEEE Photonics Journal*, vol. 6, no. 2, Paper 7900811, Apr. 2014. (11 pages).
- [J-40] I. B. Djordjevic, M. Cvijetic, and C. Lin, "Multidimensional Signaling and Coding Enabling Multi-Tb/s Optical Transport and Networking," *IEEE Sig. Proc. Mag.*, vol. 31, no. 2, pp. 104-117, Mar. 2014.
- [J-41] I. B. Djordjevic, W. Shieh, X. Liu, M. Nazarathy, "Advanced Digital Signal Processing and Coding for Multi-Tb/s Optical Transport," *IEEE Sig. Proc. Mag.*, vol. 31, no. 2, pages 15 and 142, Mar. 2014. (From the Guest Editors.)
- [J-42] M.-F. Huang, A. Tanaka, E. Ip, Y.-K. Huang, D. Qian, Y. Zhang, S. Zhang, P. N. Ji, I. B. Djordjevic, T. Wang, Y. Aono, S. Murakami, T. Tajima, T. J. Xia, and G. A. Wellbrock, "Terabit/s Nyquist Superchannels in High Capacity Fiber Field Trials Using DP-16QAM and DP-8QAM Modulation for Regional and Long-Haul Applications," *IEEE/OSA J. Lightwave Technol.*, vol. 32, no. 4, pp. 776-782, Feb. 15, 2014.
- [J-43] J. He, R. A. Norwood, M. Brandt-Pearce, I. B. Djordjevic, M. Cvijetic, S. Subramaniam, R. Himmelhuber, C. Reynolds, P. Blanche, B. Lynn, N. Peyghambarian, "A survey on recent advances in optical communications," *Computers and Electrical Engineering*, vol. 40, no. 1, pp. 216-240, Jan. 2014.
- [J-44] I. B. Djordjevic, "Multidimensional QKD Based on Combined Orbital and Spin Angular Momenta of Photon," *IEEE Photonics Journal*, vol. 5, no. 6, Paper 7600112, Dec. 2013. (12 pages)
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